Please **CANCEL** claim 1 without prejudice or disclaimer.

Please **ADD** new claims 2-33.

2. (New) A method for thermally managing temperature of a microprocessor provided within a computer system, the microprocessor operates in accordance with a clock having a clock frequency, said method comprising:

monitoring temperature of the microprocessor;

comparing the temperature of the microprocessor with a first threshold temperature; and

stepwise decreasing the clock frequency of the clock when said comparing determines that the temperature of the microprocessor exceeds the first threshold temperature.

3. (New) A method as recited in claim 2, wherein said monitoring, said comparing and said decreasing are periodically performed.

4. (New) A method as recited in claim 2, wherein said decreasing of the clock frequency operates to periodically and incrementally decrease the clock frequency of the clock when said comparing determines that the temperature of the microprocessor continues to exceed the first threshold temperature.

5. (New) A method as recited in claim 2, wherein said method further comprises:

subsequently stepwise increasing the clock frequency of the clock when both (i) the temperature of the microprocessor is less than the first threshold temperature and (ii) the clock frequency was previous decreased by said stepwise decreasing.

6. (New) A method as recited in claim 2,

wherein said method further comprises:

subsequently increasing the clock frequency of the clock after the temperature of the microprocessor reaches a second threshold temperature, the second threshold temperature being less than the first threshold temperature.

7. (New) A method as recited in claim 6, wherein said stepwise decreasing and said increasing operates to operate manage the temperature of the microprocessor with a suitable thermal range.

8. (New) An apparatus for thermally managing temperature of a microprocessor provided within a computer system, the microprocessor operates in accordance with a clock having a clock frequency, said apparatus comprising:

a temperature sensor configured to monitor temperature of the microprocessor; and

a clock control unit operatively connected to said temperature sensor, said clock control unit operates to compare the temperature of the microprocessor with a first threshold temperature and to stepwise decrease the clock frequency of the clock when the temperature of the microprocessor exceeds the first threshold temperature.

9. (New) An apparatus as recited in claim 8, wherein said clock control unit operates to periodically and incrementally decrease the clock frequency of the clock when the temperature of the microprocessor continues to exceed the first threshold temperature.

10. (New) An apparatus as recited in claim 8, wherein said clock control unit further operates to subsequently increase the clock frequency of the clock after the temperature of the microprocessor reaches a second threshold temperature, the second threshold temperature being less than the first threshold temperature.

11. (New) A computing apparatus, comprising:

a processing unit, said processing unit executes instructions in accordance with a clock signal having a clock frequency;

a temperature sensor that monitors temperature of said processing unit; and

a clock control unit operatively connected to said processing unit and said temperature sensor, said clock control unit operates to alter the clock frequency of the clock signal in a gradual and dynamic manner based on the temperature of said processing unit as monitored by said temperature sensor.

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12. (New) A computing apparatus as recited in claim 11, wherein said clock control unit operates to decrease the clock frequency when the temperature of said processing unit is too high.

13. (New) A computing apparatus as recited in claim 11, wherein said computing apparatus is a microprocessor.

14. (New) A computing apparatus as recited in claim 11, wherein said computing apparatus is a computer system.

15. (New) A computing apparatus as recited in claim 11,

wherein said computing apparatus further comprises:

an activity detector that monitors activity of said processing unit,

wherein said clock control unit is operatively connected to said processing unit, said temperature sensor and said activity detector, and

wherein said clock control unit operates to alter the clock frequency of the clock signal in a gradual and dynamic manner based on the temperature of said processing unit as monitored by said temperature sensor and on the activity of said processing unit as monitored by said activity detector.

16. (New) A computing apparatus as recited in claim 15,

wherein said clock control unit operates to increase the clock frequency when demanded by the activity of said processing unit, and

wherein said clock control unit operates to decrease the clock frequency when the temperature of said processing unit is too high.

17. (New) A computer comprising:

a processing unit, said processing unit executes instructions in accordance with a clock signal having a clock frequency;

a temperature sensor that monitors temperature of said processing unit; and

a clock control unit operatively connected to said processing unit and said temperature sensor, said clock control unit operates to alter the clock frequency of the clock signal in a stepwise manner based on the temperature of said processing unit as monitored by said temperature sensor.

18. (New) A computer as recited in claim 17, wherein said clock control unit operates to decrease the clock frequency of the clock signal in a stepwise manner when the temperature of said processing unit exceeds a first threshold level.

19. (New) A computer as recited in claim 17, wherein, after the temperature of said processing unit exceeds a first threshold level, said clock control unit operates to decrease the clock frequency of the clock signal in a stepwise manner until the temperature is below the first second threshold level.

20. (New) A computer as recited in claim 17, wherein, after the temperature of said processing unit exceeds a first threshold level, said clock control unit operates to decrease the clock frequency of the clock signal in a stepwise manner until the temperature is below a second threshold level.

21. (New) A computer as recited in claim 17, wherein said processing unit is a microprocessor.

22. (New) A computer, comprising:

a processor, said processor processes instructions in accordance with a clock signal;

an activity detector operatively connected to said processor, said activity detector monitors activity of said processor, said activity detector determines whether said processor is in a normal power mode or a reduced power mode;

a fan; and

a fan controller, said fan controller controls the speed of said fan in accordance with the activity of said processor such that the speed of said fan is less utilized when said processor is in the reduced power mode than when said processor is in the normal power mode.

Sub B2 23. (New) A computer as recited in 22, wherein the reduced power mode includes at lea

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24. (New) A computer as recited in 23, wherein when said fan controller causes said fan to stop when said processor is in the sleep state.

Sub B2 25. (New) A computer as recited in claim 22, wherein said fan controller uses pulse widt

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26. (New) A computer as recited in claim 22,

A1 wherein said computer further comprises a temperature sensor that produces a temperature signal, and

wherein said fan controller controls the speed of said fan based at least in part on the temperature signal.

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27. (New) A computer as recited in claim 26, wherein said temperature sensor produces the temperature signal based on the temperature of said processor.

28. (New) A method for thermally managing temperature of a microprocessor provided within a computer system, the computer system including a cooling fan operable at a plurality of speeds, said method comprising:

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monitoring temperature of the microprocessor;

comparing the temperature of the microprocessor with a first threshold temperature; and

stepwise controlling the speed of the cooling fan when said comparing determines that the temperature of the microprocessor exceeds the first threshold temperature.

29. (New) A method as recited in claim 28, wherein the cooling fan is a microprocessor cooling fan.

30. (New) A method as recited in claim 28, wherein said stepwise controlling operates to periodically and incrementally increase the speed of the cooling fan when said comparing determines that the temperature of the microprocessor continues to exceed the first threshold temperature.

31. (New) A method as recited in claim 28, wherein said method further comprises:

subsequently stepwise decreasing the speed of the cooling fan when the temperature of the microprocessor is less than the first threshold temperature.

32. (New) A method as recited in claim 28,

wherein said method further comprises:

subsequently decreasing the speed of the cooling fan after the temperature of the microprocessor reaches a second threshold temperature, the second threshold temperature being less than the first threshold temperature.

33. (New) A method as recited in claim 28, wherein said stepwise controlling operates to operate manage the temperature of the microprocessor with a suitable thermal range.